

Organic substances in optimal balance







Bioma®

A Swiss company with more than 30 years of international presence.

BIOMA is a company active in the production and marketing of "Chemical free" and "GMO free" solutions for the food industry, oenology, agriculture, environmental bioremediation, zootechnics and animal and human well-being.

Our products optimize all biological processes through indigenous microbiology and make it possible to reach an optimal balance in the involved biomass. We seek to reduce the environmental impact within each of the previously mentioned areas.

The purpose of BIOMA solutions is to optimize the processes while guaranteeing economic sustainability.







Geolife[®] technology An innovative manufacturing and patented process.

Geolife[®] is a technology for the extraction and stabilization of organic compounds allowing the activation of our products. This technology makes our products unique, easy to use and safe for the user, animals and the environment.

Kopros® P

Better bio-balance of organic materials and their valorization

What is Kopros® P?

Kopros[®] P is a complex biological catalyst for the activation of the composting process of pig manure. Kopros[®] P enables the transformation mechanisms of manure and slurry to be activated and accelerated.

How does Kopros® P work?

Microorganisms are applied to all areas where animal droppings are present (e.g. litter or manure pits, etc.). These stimulate the indigenous microbiological activity, accelerating the humification, mineralization and nitrification processes (composting process), in order to drastically reduce ammonia and other harmful gas emissions.

What are the benefits?



How to prepare it?



Dosage: Adapted to the number of livestock.

- Step 1: Rehydration phase (micro-organisms awakening).
- Step 2: Filtration and incorporation phase.
- **Step 3:** Activation phase.

How to apply?



Volume of water: adapted to the surface (sq) Working pressure: max 2000 in H_2O Frequency of application: every 28 to 30 days Treated surface: any type of coating / litter

Possible use in the presence of animals

A Kopros[®] for every farm



Our results:

Comparison between sectors **G2** and **G5**

Ammonia evolution from May 3, 2020 to May 29, 2020, before the first application



NH₃ in PPM	without Kopros® P	without Kopros® P	
Average NH3 (in PPM)	5,9	5,2	
Maximum NH₃ (in PPM)	33	28	

Evolution of ammonia from May 29, 2020 to June 26, 2020, first month of application



NH₃ in PPM	with Kopros® P	without Kopros® P	
Average NH3 (in PPM)	3,18	17,65	
Maximum NH3 (in PPM)	19	100	

Ammonia values evolution in a 600-sow barn.

We can observe that during the period before the treatment, the NH₃ values are relatively close, which is interesting in order to initiate a comparative study. However, room **G2** has slightly higher values, so it is this room that we decided to process with Kopros® P.

The first treatment with Kopros® P was applied in the pre-pit under the pigsty. The first results were positive and it was also noticed that the NH₃ spikes were significantly reduced



Our results :





	Sample: pigs on slatted floors (21.11.2019)			Sample: pigs on slatted floors (19.05.2020)		
	As is	Unit of measurement	Limit of quantification	As is	Unit of measurement	Limit of quantification
Moisture (103°)	99,22	g/100 g	1	89,96	g/100 g	1
Dry material	0,78	g/100 g		10,04	g/100 g	
Total nitrogen	6,66	g/Kg	0,12	7,89	g/Kg	0,12
Potassium	8,9	g/Kg		1,13	g/Kg	
Phosphorus	32,88	g/Kg		7,35	g/Kg	
Ammoniacal nitrogen	0,21	mg/Kg	0,012	0,36	mg/Kg	0,012
Total coliform count	1,200,000 UFC/g		90,000 UFC/g			

Both analyses at the beginning of the cycle (21.11.2019) and at the end of the Kopros® P treatment cycle (19.05.2020) demonstrate a significant difference in values. Particularly: reduction of moisture with the increase of dry matter indicating a humic activity of the aerobic microbiology. A significant reduction in the total nitrogen, potassium and phosphorus elements, as well as the metabolization and production of harmful gases. The reduction of total coliforms are an indication of high microbial activity, which foster a reduction of their proliferation.

The use of Kopros® P for six months reduced the presence of harmful gases in the living environment of the livestock and the working environment of the workers. In addition, it made the manure less polluting in total coliforms and reduced the concentration of total nitrogen by volume, allowing a larger spreading volume for the same soil surface.

Product composition:

Dried and selected cultures of microorganisms on cereal and talc substrate.

Classification and Labeling:

Chemicals are classified according to their level of physical, health and environmental hazard. These hazards are indicated by specific labels and safety data sheets (SDS). With the GHS (Globally Harmonized System), hazard statements have been worldwide standardized so that the recipients of the information (production workers, first aiders and consumers) can better understand the hazards of the chemicals used. In the EU, the principles of the GHS are ratified in the EU-1272/2008 (CLP) regulation. In accordance with this regulation, the Kopros® range must not be classified or labeled according to its physicochemical properties, its effects on the health and safety of the environment and is not required to submit a safety data sheet. The Kopros® range includes only organisms that are naturally present in nature and non-hazardous (WHO Class 1).

Compliance:

The Kopros® range is compliant with the NFU 44-051 standard and compliant with the European regulation EC 834/2007 and the American Regulation NOP (National Organic Program). It can be used in organic agriculture according to FiBL Suisse and Ecocert.

Solar Impulse Efficient Solution

Kopros[®] has been selected by the Solar Impulse Foundation as one of the 1000 solutions to protect the environment in a cost-effective way.



Kopros® ZERO EMISSIONS LIVESTOCK FARMING

220415_KoprosP_EN_IT





Notes:

Distributor BIOMA ITALIA S.R.L.

Viale Monte Santo 1/3 20124 Milano (MI) Italy +39 347 407 2227 info@bioma.com www.bioma.com

Manufacturer BIOMA SA

Via Luserte Sud 8 CH - 6572 Quartino Switzerland +41 91 840 1015 info@bioma.com www.bioma.com

